

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Shushi IKEDA, et al.

SERIAL NO: New Application

GAU:

FILED: Herewith

EXAMINER:

FOR: STEEL SHEET WITH EXCELLENT BENDABILITY

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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| Form PTO 1449<br>(Modified)  |    | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |          | ATTY DOCKET NO.<br>240733US0      |  | SERIAL NO.<br>New Application                                    |                               |
| LIST OF REFERENCES CITED BY APPLICANT  |    |  |          | APPLICANT<br>Shushi IKEDA, et al. |  |  |                               |
|  |    |  |          | FILING DATE<br>Herewith           |  | GROUP  |                               |
| <b>U.S. PATENT DOCUMENTS</b>   |    |  |          |                                   |  |  |                               |
| EXAMINER<br>INITIAL  |    | DOCUMENT<br>NUMBER   | DATE     | NAME                              | CLASS                                      | SUB<br>CLASS   | FILING DATE<br>IF APPROPRIATE |
|  | AA |  |          |                                   |  |  |                               |
|  | AB |  |          |                                   |  |  |                               |
|  | AC |  |          |                                   |  |  |                               |
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|  | AM |  |          |                                   |  |  |                               |
|  | AN |  |          |                                   |  |  |                               |
| <b>FOREIGN PATENT DOCUMENTS</b>  |    |  |          |                                   |  |  |                               |
|  |    | DOCUMENT<br>NUMBER   | DATE     | COUNTRY                           | TRANSLATION<br>YES                      NO |  |                               |
|  | AO | 60-43425   | 03/08/85 | Japan                             |  |  | X                             |
|  | AP |  |          |                                   |  |  |                               |
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|  | AU |  |          |                                   |  |  |                               |
|  | AV |  |          |                                   |  |  |                               |
| <b>OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)</b>   |    |  |          |                                   |  |  |                               |
|  | AW |  |          |                                   |  |  |                               |
|  | AX |  |          |                                   |  |  |                               |
|  | AY |  |          |                                   |  |  |                               |
|  | AZ |  |          |                                   |  | <input type="checkbox"/> Additional References sheet(s) attached |                               |
| Examiner   |    |  |          |                                   | Date Considered                            |  |                               |
| *Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |    |  |          |                                   |  |  |                               |

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FOR: STEEL SHEET WITH EXCELLENT BENDABILITY

**STATEMENT OF RELEVANCY**

**Reference AO (60-43425) of Form PTO-1449:**

This reference is discussed in the specification.

**PURPOSE:** To obtain a composite structure steel sheet having excellent ductility and workability and high strength by hot rolling a specifically composed C-Si-Mn steel at a specified finishing temp. and controlling cooling and coiling temp. thereby optimizing the structure.

**CONSTITUTION:** A steel consisting of 0.30-0.65wt% C, 0.7-2.0% Si, 0.5-2.0% Mn and the balance Fe with inevitable impurities is hot rolled at the finishing temperature specified to  $Ar_3 - Ar_3 + 50$  deg.C. Such steel sheet is held for 4-20sec in a 450-650 deg.C range and is coiled at  $\leq 350$  deg.C. The final structure consisting, by volume fraction, of  $\geq 10\%$  ferrite,  $\geq 10\%$  austenite and the balance bainite or martensite is obtained by such temp. control. The hot rolled composite structure steel sheet having high strength and high workability is obtained by the above-mentioned method without requiring any special alloy element.